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United States Patent [19]**Müller**[11] **Patent Number:** **5,508,317**[45] **Date of Patent:** **Apr. 16, 1996**[54] **PHOTOCROSSLINKED POLYMERS**[75] **Inventor:** **Beat Müller**, Marly, Switzerland[73] **Assignee:** **Ciba-Geigy Corporation**, Tarrytown, N.Y.[21] **Appl. No.:** **286,035**[22] **Filed:** **Aug. 4, 1994**[30] **Foreign Application Priority Data**

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C08L 29/04; B29D 11/00[52] **U.S. Cl.** **522/85**; 522/84; 522/86;
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525/61; 525/937; 264/11[58] **Field of Search** 264/1.1; 522/84,
522/85, 86; 523/106, 107, 108; 525/57,
59, 61, 937[56] **References Cited****U.S. PATENT DOCUMENTS**

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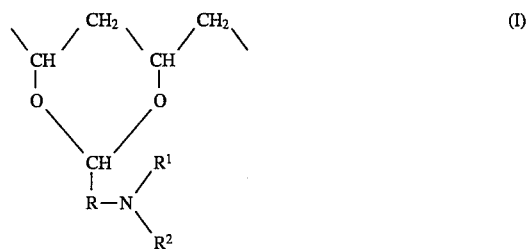
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[57] **ABSTRACT**

The invention relates to a novel process for the manufacture of mouldings, especially contact lenses, in which a soluble prepolymer comprising crosslinkable groups is crosslinked in solution, and also to mouldings, especially contact lenses, obtainable in accordance with that process. The present invention relates also to novel prepolymers that can be used in the process according to the invention, especially derivatives of a polyvinyl alcohol having a molecular weight of at least about 2000 that, based on the number of hydroxy groups of the polyvinyl alcohol, comprise from approximately 0.5 to approximately 80% of units of formula I



wherein

R is lower alkylene having up to 8 carbon atoms,

R¹ is hydrogen or lower alkyl and

R² is an olefinically unsaturated, electron-attracting, copolymerisable radical preferably having up to 25 carbon atoms, to crosslinked polymers, either homo- or co-polymers of those novel prepolymers, to processes for the preparation of the novel prepolymers and the homo- and co-polymers obtainable therefrom, to mouldings made from the said homo- or co-polymers, especially contact lenses made from those homo- or co-polymers, and to processes for the manufacture of contact lenses using the said homo- or co-polymers.

19 Claims, No Drawings